

Change (Decimal)	Previous State (Binary)	New State (Binary)	Logic Transitions	Change (Decimal)	Previous State (Binary)	New State (Binary)	Logic Transitions
0 to 1	000	001	1	1 to 0	001	000	1
0 to 2	000	010	1	2 to 0	010	000	1
0 to 3	000	011	2	3 to 0	011	000	2
0 to 4	000	100	1	4 to 0	100	000	1
0 to 5	000	101	2	5 to 0	101	000	2
0 to 6	000	110	2	6 to 0	110	000	2
0 to 7	000	111	3	7 to 0	111	000	3
1 to 2	001	010	2	2 to 1	010	001	2
1 to 3	001	011	1	3 to 1	011	001	1
1 to 4	001	100	2	4 to 1	100	001	2
1 to 5	001	101	1	5 to 1	101	001	1
1 to 6	001	110	3	6 to 1	110	001	3
1 to 7	001	111	2	7 to 1	111	001	2
2 to 3	010	011	1	3 to 2	011	010	1
2 to 4	010	100	2	4 to 2	100	010	2
2 to 5	010	101	3	5 to 2	101	010	3
2 to 6	010	110	1	6 to 2	110	010	1
2 to 7	010	111	2	7 to 2	111	010	2
3 to 4	011	100	3	4 to 3	100	011	3
3 to 5	011	101	2	5 to 3	101	011	2
3 to 6	011	110	2	6 to 3	110	011	2
3 to 7	011	111	1	7 to 3	111	011	1
4 to 5	100	101	1	5 to 4	101	100	1
4 to 6	100	110	1	6 to 4	110	100	1
4 to 7	100	111	2	7 to 4	111	100	2
5 to 6	101	110	2	6 to 5	110	101	2
5 to 7	101	111	1	7 to 5	111	101	1
6 to 7	110	111	1	7 to 6	111	110	1
0 to 0	000	000	0				
1 to 1	001	001	0				
2 to 2	010	010	0				
3 to 3	011	011	0				
4 to 4	100	100	0				
5 to 5	101	101	0				
6 to 6	110	110	0				
7 to 7	111	111	0				

Fig. 1

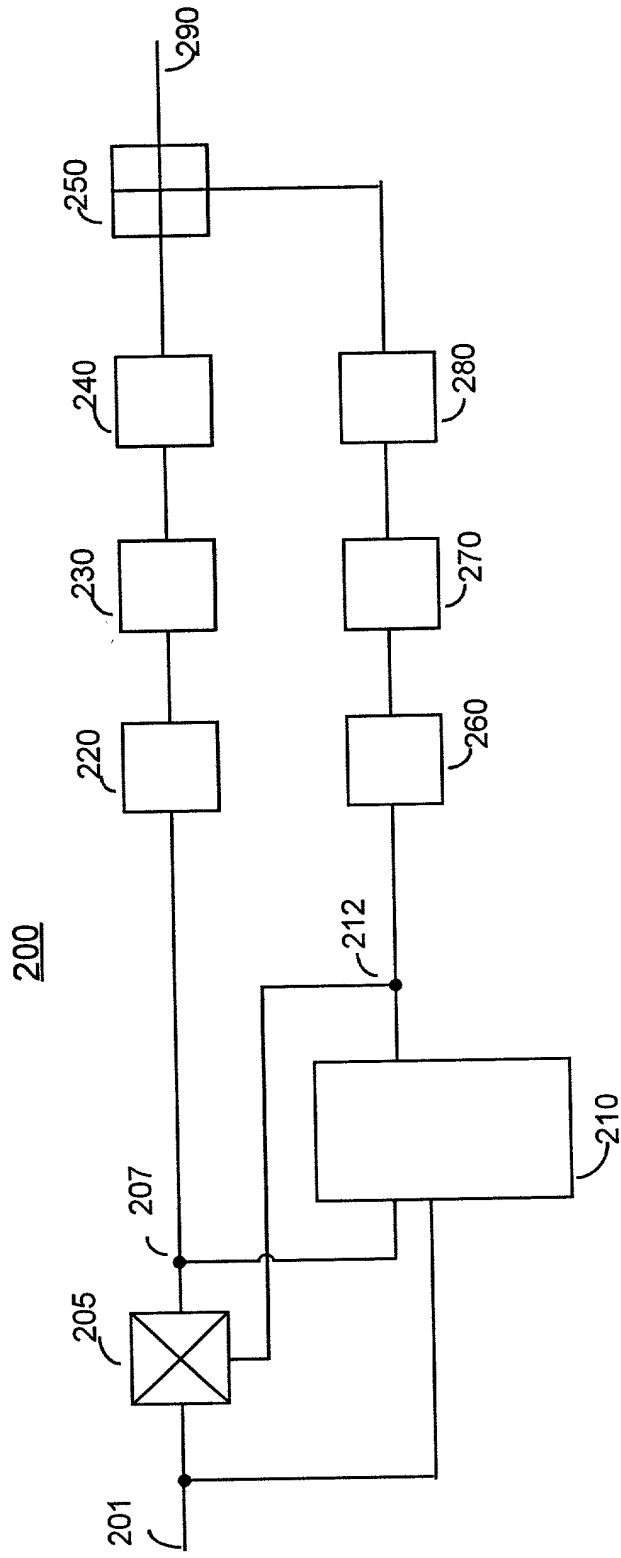


Fig. 2

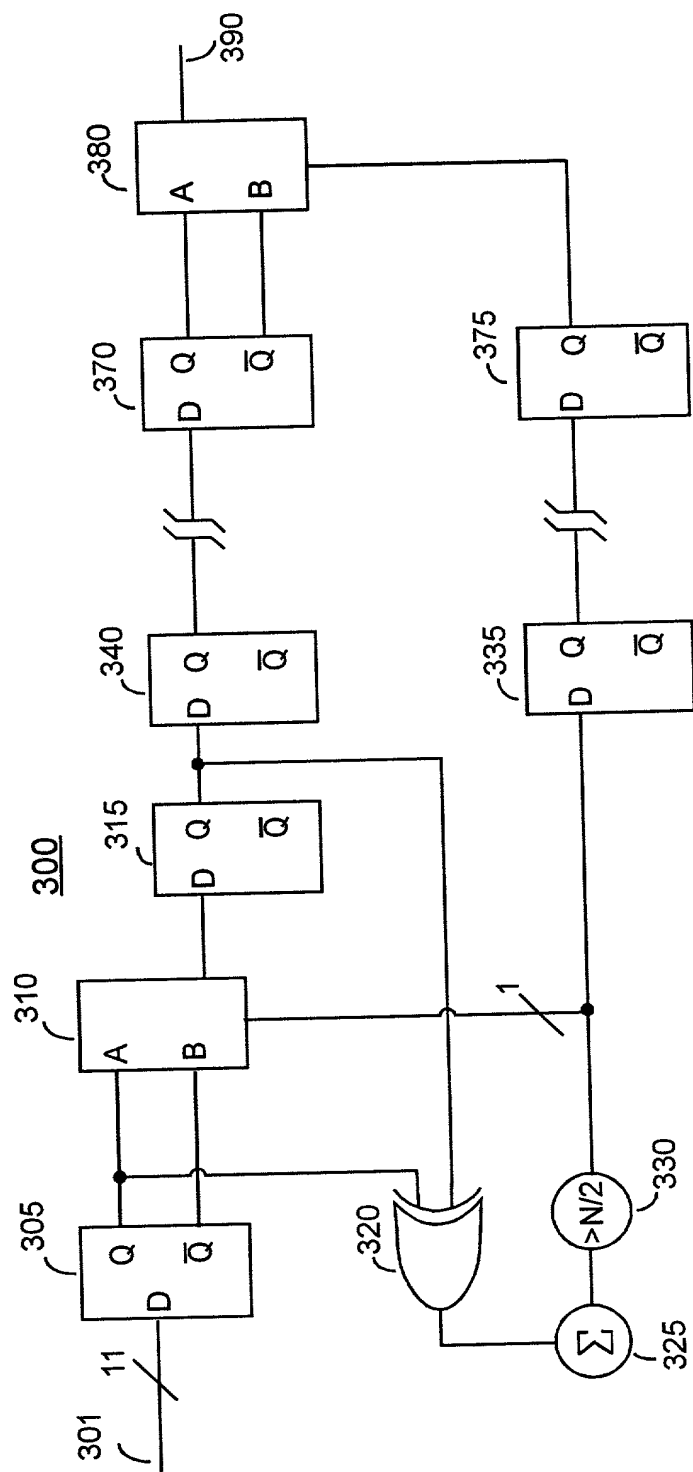


Fig. 3

Decimal Value	Binary Encoding	Logic Transitions	Inversion	Transformed Data	Logic Transitions
0	000	-	No	000	-
1	001	1	No	001	1
2	010	2	Yes	101	1
3	011	1	Yes	100	1
4	100	3	No	100	0
5	101	1	No	101	1
6	110	2	Yes	001	1
7	111	1	Yes	000	1
0	000	3	No	000	0
3	011	2	Yes	100	1
2	010	1	Yes	101	1
7	111	2	No	111	1
4	100	2	Yes	011	1
1	001	2	No	001	1

Fig. 4